Complete Summary

GUIDELINE TITLE

Cancer. Nutrition management for older adults.

BIBLIOGRAPHIC SOURCE(S)

Barrocas A, Purdy D, Brady P, Troutman D. Cancer. Nutrition management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 19 p. [28 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Cancer
- Cancer anorexia
- Cancer cachexia

GUIDELINE CATEGORY

Counseling
Evaluation
Management
Prevention
Risk Assessment
Screening
Treatment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Internal Medicine

Nutrition
Oncology
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Dietitians
Health Care Providers
Nurses
Patients
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To provide nutrition screening and intervention strategies for cancer and cancer anorexia/cachexia that will enhance disease management and health care outcomes and that will positively impact individual health and quality of life of older adults

TARGET POPULATION

Elderly individuals who are at increased risk of developing cancer; individuals with a cancer that interferes with food and nutrient intake; and individuals on anti-neoplastic regimens that have an impact on nutritional status

INTERVENTIONS AND PRACTICES CONSIDERED

Assessment and Management of Cancer Cachexia

1. Assessment tools including the "patient-generated subjective global assessment" (PG-SGA)
2. Pharmaconutrition management
    - Appetite stimulants
    - Anti-metabolic and anti-catabolic agents
    - Anabolic agents
    - Appropriate nutrition

Nutrition Screening for Cancer

Risk Assessment

1. Measurement of body weight and height
2. Evaluation of food and nutrient intake
3. Evaluation of physical activity and functional status
4. Evaluation of current medication, smoking habits, and alcoholic beverage use

Evaluation in Patients Diagnosed with Cancer

1. Evaluation of serum albumin, serum cholesterol

2. Identification of type of cancer treatment
3. Evaluation of addition anthropomorphic indices of nutritional status
4. Evaluation of physical signs/symptoms of nutritional deficiency

Nutrition Interventions for Cancer

Interventions to Reduce Risk of Cancer

1. Maintenance of reasonable weight
2. Making appropriate food choices (e.g., plants sources, limiting fats, increasing fiber)
3. Moderation/elimination of alcohol
4. Minimizing intake of salt-cured, salt-pickled, smoked foods
5. Smoking cessation
6. Physical activity

MAJOR OUTCOMES CONSIDERED

- Impact of nutritional status on cancer incidence, progression, prognosis, and health outcomes
- Effect of pharmaconutrition on cancer cachexia and/or anorexia

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Informal Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Professionals with expertise in nutrition, medicine, and allied disciplines served as authors and reviewers.

The information in A Physician´s Guide to Nutrition in Chronic Disease Management for Older Adults-Expanded Version is derived from The Role of Nutrition in Chronic Disease Care, a 1997 Nutrition Screening Initiative (NSI) publication. The authors updated their 1997 work through an extensive review of the literature, using evidence-based data where possible and consensus-based information when definitive outcomes were not available.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

The benefits of implementing low cost, low tech nutritional screening and intervention to reduce cancer risk are significant. It is currently estimated that about 32% of cancers may be avoidable by changes in diet, with 20 to 42% of cancer deaths avoidable by dietary change. Some evidence has accumulated to suggest that differences in activity patterns may account for some of the risk reduction formerly attributed to nutritional factors. However, recent data suggest that in addition to reductions in meat and fat consumption, the protective effects of as yet unidentified substances in fruits and vegetables are primary factors that contribute to these estimates of risk reduction.

Patients with cancer, particularly those receiving radiation or chemotherapy or those with advanced disease, often experience anorexia, decreased food intake, fatigue, weight loss, muscle wasting, and a decline in functional status. The provision of appropriate nutritional support often affords these patients a better quality, if not longer, life. From a health care provision standpoint, an intervention may be indicated and considered cost effective when the combination of its effects on length and/or quality of life warrant its use and support the required expense. Criteria useful in making decisions to refer patients for nutrition intervention are shown in Figure 4 of the original guideline document. Conservative cost estimates for nutrition interventions range from $52.00/month for home prepared supplements to $8,400/month for home parenteral nutrition support. The estimated yearly national cost for home enteral nutrition and home parenteral nutrition services are $357 million and $780 million, respectively. The majority of these services are generated in meeting the nutritional needs of patients with

cancer. At times, the use of life sustaining measures may not be in the patient's best interest. See Fig. 5 of the original guideline document to facilitate such decisions.

METHOD OF GUIDELINE VALIDATION

External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

An interdisciplinary advisory committee of nationally recognized practitioners in medicine, nutrition, and geriatrics reviewed the chapter related to their area of expertise.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Nutrition Screening Guidelines for Cancer (CA)

At a minimum, nutrition screening for individuals at risk of developing CA should include:

- Measure body weight at each office visit, calculate body mass index (BMI)
- Measure height (annually in those age 65 and older)
- Evaluate food and nutrient intake
- Evaluate physical activity level and functional status
- Evaluate current medications use
- Evaluate smoking habits
- Evaluate alcoholic beverage use

In addition to the elements listed above, screening in individuals who have been diagnosed with CA should include:

- Evaluate serum albumin level (>3.5 mg/dl)
- Evaluate serum cholesterol level (160 to 200 mg/dl, note precipitous drop)
- Identify type of cancer treatment utilized (i.e., radiation, surgery, chemotherapy, immunotherapy)
- Evaluate additional anthropometric indices of nutritional status if indicated (e.g., triceps skinfold, arm muscle circumference)
- Evaluate possible physical signs/symptoms of nutritional deficiency

Use of the Nutrition Screening Initiative's (NSI 1992) DETERMINE Your Nutritional Health Checklist and Level II Screen provide a structured approach in assessing the majority of the elements listed above. The Level II Screen is an invaluable initial resource in the identification and treatment of nutritional risk factors associated with CA development and in the initial assessment of patients with cancer. (See the appendices of the original guideline document for these tools.)

Nutrition Intervention Guidelines for CA

Nutrition intervention to reduce risk of CA development should include:

- Maintain a reasonable weight (body mass index [BMI] 22 to 27)
- Choose the majority of foods from plant sources
    - >5 servings of fruit and vegetables daily
    - >6 to 11 servings from the cereals and grain group
    - Increase consumption of dried beans and peas as protein sources, especially soy beans/soy products
- Limit intakes of high fat foods, especially those from animal sources. Choose:
    - Low fat foods
    - Low fat dairy products
    - Lean cuts of meat, poultry without skin
    - Low fat cooking methods
- Increase dietary fiber intakes to 20 to 30 g/day (upper limit 35 g/day)
- Moderate consumption/elimination of alcoholic beverages
- Minimize intake of salt-cured, salt-pickled, or smoked foods
- Stop smoking
- Be physically active

Nutrition intervention for patients undergoing definitive therapy for cancer is highly individualized and should be based upon risks associated with the provision of nutritional support and expected benefits to be accrued. An excellent publication of the National Cancer Institute (NCI 1992), Eating Hints: Recipes & Tips for Better Nutrition During Cancer Treatment, offers practical suggestions regarding food intake for patients with cancer and their families. When patients are unable to meet their nutritional needs via the oral route, the services of a Registered Dietitian (RD) should be enlisted to assist the patient in maintaining optimal achievable nutritional status.

Assessment and Management of Cancer Cachexia

The early identification of patients at risk for or with cancer cachexia is of paramount importance in successful outcomes. A variety of tools and tests are available. One particular assessment tool which has been validated and continues to gain acceptance is the patient-generated subjective global assessment (PG-SGA) developed by The Society for Nutritional Oncology Adjuvant Therapy (NOAT) and adopted by The American Dietetic Association´s Oncology Dietetic Practice Group. Developed in 1993 from the original SGA of Detsky et al., in 1987, this simple-to-administer tool is able to classify the risks of malnutrition and cachexia from information available directly from the patient or a surrogate. The PG-SGA has been available in Spanish since 1998.

The pharmaconutrition management of cancer cachexia has four components:

- Appetite stimulants (orexigenic). Agents include progestational agents (e.g., megestrol acetate), tetrahydrocannabinol (THC)-related agents (e.g., dronabinol, marijuana), corticosteroids (e.g., prednisolone acetate, dexamethasone), cyproheptadine, periactin, and ethanol. While these agents can increase appetite and weight, they do not prevent the decline in somatic and visceral protein that is so devastating to the cancer patient.
- Anti-metabolic and anti-catabolic agents. These are employed with the hopes of down-regulating the pro-inflammatory cascade that leads to anorexia

and/or cachexia. These include pentoxifylline, hydrazine sulfate, thalidomide, melatonin, and others including steroids and non-steroidal auto inflammatory agents, such as ibuprofen. In addition, alteration in the composition of dietary fats to increase levels of the less inflammatory prostaglandins precursors eicosapentaenoic acid (EPA) and fish oils have also been proposed. The majority of studies using these modalities have not demonstrated consistent benefits. However, recent reports using combinations (i.e., ibuprofen, fish oil, megestrol acetate) appear promising.

- Anabolic agents. Though often fraught with undesirable side effects, anabolic agents have been shown to improve the protein status in selected patients. These agents include testosterone, nandrolone, oxandrolone, growth hormone, and others.
- Appropriate nutrition. In addition to utilizing the three previous modalities, appropriate nutrition, preferably through the oral route, is recommended. In general, 25 to 30 calories/kg per day and 1.5 to 2.0 g of protein/kg per day is recommended, if tolerated, for the moderately/severely stressed cachectic cancer patient.

These four modalities provide appetite stimulation, reduce inflammatory response, increase anabolic signals, and provide the necessary macro and micronutrients. When these methods are combined with attempts to reduce or eliminate inflammatory nidus through tumor excision or debulking, they offer the optimal approach to reduce cancer cachexia.

CLINICAL ALGORITHM(S)

Algorithms for "Nutrition Intervention in Cancer Anorexia" and "Decision to Forego Life Sustaining Measures" are provided in the original guideline document.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Benefits of Nutrition Management to Patients

- Implementation of nutritional screening and risk reduction strategies in older people can help to prevent or delay the development of cancer in otherwise healthy individuals. The benefits of such low cost, low tech interventions are obvious.
- Oral, enteral, or parenteral nutrition support methodologies may not always be effective in retarding tumor growth or in the prevention of cancer recurrence after definitive therapy (e.g. radiation, surgery, chemotherapy, immunotherapy). However, many patients report significant improvement in

the quality of life indices of gastrointestinal discomfort, nausea, vomiting, fatigue level, morale, and social interactions during the course of nutrition intervention. Nutrition interventions are also frequently provided during definitive cancer therapy in an attempt to improve outcome or ameliorate toxicity. They facilitate the optimum delivery of either curative or palliative therapy at lower risk.

- Recognition of the significant alterations in metabolism that occur in individuals with cancer has led to the development of newer enteral/parenteral formulations that may be of benefit in counteracting derangements in host metabolism experienced by patients with cancer (e.g. various combinations of amino acids, carnitine supplementation). These types of products show promise in the amelioration of malnutrition and perhaps reduction in tumor growth rates in people with this dreaded disease. However, they are of unproven efficacy at this time.

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Health care professionals must decide how best to implement these recommendations in multiple settings and in patients with diverse needs. It is essential to develop a habitual approach to the nutrition screening and assessment of nutritional status in older adults, and develop policies, protocols, and procedures to ensure the implementation of disease-specific nutritional interventions. The reader should refer to other Nutrition Screening Initiative (NSI) materials for additional information and to facilitate a systematic approach to nutritional care. NSI screening tools are included as appendices of the original guideline document -- DETERMINE Your Nutritional Health Checklist and Levels I and II Screens. The Checklist was developed as a self-administered tool designed to increase public awareness of the importance of nutritional status to health and to encourage older people to discuss their own nutritional status with their primary provider. Based on this guided discussion, the provider can decide if additional screening or assessment is indicated. The Level I Screen was designed for administration by non-physician health care providers in community settings while Level II requires administration by physicians and physician-extenders that have the ability to order and interpret laboratory parameters indicative of nutritional health.

Evaluation Criteria to Document Improved Health Outcomes

Evaluation criteria useful in documenting the impact of nutrition screening and intervention on health status are consistent with the goals of nutrition screening and intervention to reduce cancer risk, and include:

- Maintenance of a reasonable weight (body mass index [BMI] 22 to 27 for those age 65 years and older, or a weight within the desirable range on standard weight-for-height tables)

- Consumption of minimum number of recommended servings from vegetable, fruit, and grain groups
- Consumption of dried beans and peas as protein sources, especially soy beans/soy products
- Limited intake of high fat foods, especially those from animal sources
- Increased dietary fiber intakes to 20 to 30 g/day (upper limit 35 g/day)
- Moderate consumption/eliminate alcoholic beverages
- Limited intake of salt-cured, salt-pickled, or smoked foods
- Stop smoking
- Increased physical activity consistent with age and ability

In individuals with established cancer, evaluation criteria useful in documenting the impact of nutrition screening and intervention on health status include, in addition to maintenance of a reasonable weight, when possible, factors related to quality of life such as:

- Reduced gastrointestinal discomfort
- Improved ability to swallow
- Improved food taste
- Reduced mouth dryness
- Increased food/nutrient intake
- Decreased nausea and/or vomiting
- Enhanced energy level
- Improved functional status
- Improved emotional and/or cognitive status
- Improved morale
- Increased social interaction

Evaluation Criteria to Document the Impact of Nutrition Management on the Health Care System

In addition to the evaluation criteria listed above, the following may be used to assess the impact of nutrition screening and intervention for cancer on the delivery of health care. Reductions or improvements in these indicators could be used to document a positive impact of nutrition screening and intervention in individuals at increased risk of developing cancer or those with established cancer to whom routine and appropriate nutritional care is made available.

- Incidence of diet-related cancers in the population served
- Tolerance for cancer treatment prescribed
- Incidence/improvement in nutritional comorbidities commonly seen in patients with cancer
- Type, quantity, or number of doses of medication needed to manage the nutrition-related side effects of cancer therapy
- Number of visits to the health care provider needed to successfully manage nutritional comorbidities associated with cancer and/or its treatment
- Rates of admission, readmission, or length of stay in acute or long-term care settings for the management of cancer and/or its nutrition-related consequences

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

End of Life Care
Living with Illness
Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Barrocas A, Purdy D, Brady P, Troutman D. Cancer. Nutrition management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 19 p. [28 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002

GUIDELINE DEVELOPER(S)

American Academy of Family Physicians - Medical Specialty Society
American Dietetic Association - Professional Association
Nutrition Screening Initiative - Professional Association

GUIDELINE DEVELOPER COMMENT

The Nutrition Screening Initiative (NSI) is a partnership of the American Academy of Family Physicians (AAFP) and the American Dietetic Association (ADA). It is funded in part through a grant from Ross Products Division, Abbott Laboratories.

Additional information can be obtained from the AAFP Web site and the ADA Web site.

SOURCE(S) OF FUNDING

The Nutrition Screening Initiative (NSI) is funded in part through a grant from Ross Products Division, Abbott Laboratories.

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary authors: Albert Barrocas, MD, FACS (Vice President Medical Affairs and Medical Director of Nutrition Support and Home Health Services, Pendleton Memorial Methodist Hospital, New Orleans, LA); Dana Purdy, RD, LDN (Consultant Dietitian, Nutri Pro Inc., New Orleans, LA); Patrick Brady, RN, BSN, OCN, CPT (Community Nurse Educator, Wellspring Coordinator, Pendleton Memorial Methodist Hospital, New Orleans, LA); Debra Troutman, RN, OCN (Patient Care Coordinator, Radiation Therapy, Cancer Center, Pendleton Memorial Methodist Hospital, New Orleans, LA)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Family Physicians (AAFP) Web site and to members only from the American Dietetic Association (ADA) Web site.

Print copies: Not available

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Nutrition Screening Initiative (NSI). A physician´s guide to nutrition in chronic disease management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 18 p.

Electronic copies available in Portable Document Format (PDF) from the American Academy of Family Physicians (AAFP) Web site and the American Dietetic Association (ADA) Web site.

Electronic copies also available for download in Personal Digital Assistant (PDA) format from the American Academy of Family Physicians (AAFP) Web site.

Print copies: Available from Ross Educational Service Materials; Phone: (800) 986-8503; Web site: www.Ross.com/nsi.

PATIENT RESOURCES

The following is available:

- Managing chronic disease. Food tips if you need extra nutrients. In: Nutrition Screening Initiative (NSI). A physician´s guide to nutrition in chronic disease management for older adults. Washington (DC): Nutrition Screening Initiative (NSI); 2002. 4 p.

Electronic copies available in Portable Document Format (PDF) from the American Academy of Family Physicians (AAFP) Web site and the American Dietetic Association (ADA) Web site.

Electronic copies also available for download in Personal Digital Assistant (PDA) format from the American Academy of Family Physicians (AAFP) Web site.

Print copies: Available from Ross Educational Service Materials; Phone: (800) 986-8503; Web site: www.Ross.com.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on April 16, 2004. The updated information was verified by the guideline developer on June 21, 2004.

COPYRIGHT STATEMENT

Date Modified: 11/15/2004